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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,956	08/08/2001	Dana Simonson	550.199US1	2011

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EXAMINER	
PHAN, TRI H	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/924,956	SIMONSON ET AL.	
	Examiner	Art Unit	
	Tri H. Phan	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *7 and 16* is/are allowed.

6)☐ Claim(s) *1-4,6,8-15 and 17-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 August 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/19/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment/Arguments

1. This Office Action is in response to the Response/Amendment filed on May 12th, 2006. Claim 5 is now canceled. Claims 1-4 and 6-38 are now pending in the application.

Drawings

2. This application has been filed with informal drawings (Figures 1 and 23), which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 6, 8-15 and 17-38 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaughnessy et al.** (U.S.6,141,347; hereinafter refer as '**Shaughnessy**') in view of **Brennan et al.** (U.S.6,519,472; hereinafter refer as '**Brennan**').

- In regard to claims 1 and 22, Shaughnessy discloses, the software program and method for implementing the program instructions (for example see figures 2, 4 and 6; col. 6, lines 35-38); which comprise

receiving a digital message from a communication source coupled to a network (for example see col. 6, lines 38-39; where the site receives message from the subscriber unit as illustrated in step 601 of figure 6);

selecting a multicast address from a plurality of addresses based on a communication group identification number received from the communication source (for example see steps 602-603 in figure 6; col. 6, lines 64-66; col. 7, lines 5-9, 40-44; where the site determines the multicast address corresponding to the talk group identification, e.g. "*communication group identification number*", in the affiliation message. It is also obvious that the talk group has more than one reference subscriber units, e.g. "*two or more members*", as disclosed in figure 2; col. 3, lines 18-26);

communicating a routing signal based on the selected multicast address to selected elements of the network (for example see step 604 in figure 6; col. 7, lines 17-21, 26-31); *and*

distributing the digital message to the members using the selected elements based on the routing signal (for example see steps 605-608 in figure 6; col. 7, lines 31-35).

Shaughnessy does disclose the talk group, e.g. "*communication group identification number*" for communicating in different environment as dosclosed in col. 3, lines 26-29; but fails to explicitly disclose wherein *the communication group identification number including a network access code 'NAC'*. However, such implementation is known in the art.

For example, **Brennan** discloses the talk group and channel identification code, e.g. "*network access code NAC*", in the channel assignment message for indicating the assigned working channel to the subscriber unit with intended talk group (for example see col. 2, lines 54-60) in the multi channels, i.e. different frequencies.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to provide the channel identification code as taught by **Brennan** with the talk group identification in the **Shaughnessy**'s reconfiguration message, with the motivation being to control the tuning frequency for providing a reliability during communications as disclosed in **Brennan**: col. 27, lines 25-31.

- Regarding claims 2-3, **Shaughnessy** further discloses, *wherein receiving a digital message from a two way radio* (for example see figure 2; col. 4, lines 44-47; wherein the subscriber unit is a two way units) and *wherein receiving a digital message from a computer coupled to an audio transducer* (wherein the "*transducer*" is obvious in the subscriber unit (processor in figure 3) and the controller (processor in figure 4) in order to convert voice or data for transmitting to/from the talk group as disclosed in col. 6, lines 24-28 in the communication system 200 of figure 2).

- In regard to claim 4, **Shaughnessy** further teaches, *wherein selecting a multicast address includes mathematically mapping the communication group identification number to the multicast address* (implicitly taught because a processor in a server is programmed to map a

communication group identification number to the multicast address accordingly as disclosed in figures 2-3; col. 5, lines 2-10).

- Regarding claim 6, **Shaughnessy** further teaches, *wherein selecting a multicast address from a plurality of addresses based on a communication group identification number received from the communication source includes selecting a multicast address from a plurality of addresses based on a system identification number 'system ID'*, wherein *network access code 'NAC' or system ID* also referred to as the talk group (see applicant's specification page 18, lines 5-7) number received from the communication source (for example see col. 2, lines 56-58; col. 7, lines 5-9; where the site maintains mapping multicast address to talk groups for selecting purposes. It is also obvious that each group or system has different identification in order to identify with each other in communication).

Brennan also discloses the system type, e.g. "*system ID*", in bit 21 of figures 8A-B.

It would have been obvious to one of ordinary skill in the art at the time of invention to include the *system identification number*, e.g. talk group identification, for providing the identification for each talk group in the system. The motivation for using the *system identification number* is for distinctively identifying with other talk groups in the network as disclosed in **Shaughnessy**: col. 3, lines 15-18.

- In regard to claims 8 and 9, **Shaughnessy** further teaches, *wherein selecting a multicast address includes accessing a registry of members or talk groups* (figure 2 at site 208 shows a list of members in a talk group and each talk group, for example TG ID D, includes a list of

members that includes 212, 250, 213..., stored in database specified in col. 6, lines 49-54; col. 7, lines 40-44).

- Regarding claim 10, the combination of **Brennan** and **Shaughnessy** further teaches, *wherein accessing a registry of members includes accessing a registry of network access codes 'NACs'* (figure 2 at site 208 shows a talk group ID, for example TG ID D includes a List of members that include 212, 250, 213 ..., stored in database specified in col. 6, lines 49-54; col. 7, lines 40-44; where the talk group also referred to as network access code 'NAC' or system ID, see applicant's specification page 18, lines 5-7; or disclosed in **Brennan**; col. 2, lines 54-60; as the channel identification code, e.g. "*network access code NAC*", in the channel assignment message for indicating the assigned working channel to the subscriber unit with intended talk group in the multi channels, i.e. different frequencies).

- In regard to claims 11 and 12, **Shaughnessy** further teaches, *accessing a registry of members* (as in claim 12) *includes accessing a registry of unit identifiers corresponding to subscribers* (col.3, lines 12-21, a plurality of subscriber units (accessing talk group A gives access to identified units 214 and 215 as shown with the talk group identification, e.g. "*registry of group numbers*" as in claim 11, see col. 5, lines 41-48) shows at site 208 '*registry of sites*' in figure 2, when the subscriber unit registers when roaming or handover, e.g. VLRs, and the "*registry of home channels*" is just the registry where the subscriber unit belongs to, e.g. HLRs, as disclosed in col. 1, lines 40-47; which is maintained/stored at each sites as disclosed in col. 2, lines 56-58; col. 6, lines 49-54; col. 7, lines 40-44).

- Regarding claim 13, **Shaughnessy** further teaches, *accessing a registry of members includes accessing a registry of call guards of a communication system* (for example see col. 5, lines 42-59; where call guards function to identify a member of a group, so whenever a subscriber joins a site request, an affiliation message allows a site to identify the subscriber to that talk group to which he belongs).

- In regard to claims 14 and 23, **Shaughnessy** further teaches, *wherein further including receiving a request from a communication receiver to register with the selected multicast address* (for example see col.5, lines 41-48, where site controller receives a request from a subscriber, for affiliation).

- Regarding claims 15, 19 and 24, **Shaughnessy** further teaches, *wherein distributing the digital message includes encoding using real time transport protocol 'RTP'* (for example see col. 6, lines 23-25; where voice conversation between talk groups is in real time and where the "*RTP protocol*" is well known for transporting real time data in the IP network).

- In regard to claims 17 and 18, **Shaughnessy** further teaches, *wherein distributing the digital message includes distributing a packet using Internet protocol 'IP'* (for example see col. 3, lines 45-47) *and distributing control messaging* (where the IGMP is used for forwarding information between routers across the network as disclosed in col. 3, lines 58-65; col. 6, lines 4-8).

- Regarding claims 20-21, **Shaughnessy** does disclose using protocols and software program for implementing into the system (for example see col. 5, lines 40-42; col. 6, lines 34-38), but fails to explicitly disclose about "*SOAP*" or "*XML*". However, *SOAP* and *XML* are well known in the art and wherein using different types of protocols or software program codes are system engineering choices. Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to use the *SOAP* or *XML* software program as for the system engineering choice.

- In regard to claims 25 and 36, **Shaughnessy** discloses, *a system comprising*

a plurality of communication devices (for example see figures 1-2; wherein the devices such as the subscriber units, base stations, etc. have the transceiver in order to receive/transmit voice/data as disclosed in col. 4, lines 44-47);

a plurality of routers wherein each communication device is coupled to at least one router of the plurality of routers (for example see figures 2, 4; col. 3, lines 34-45; col. 4, line 62 through col. 5, line 2);

a digital communication network ('packet network 201' in figure 2; col. 3, lines 34-45) *coupled to the plurality of routers; and*

means for mapping a communication identification number to a multicast address (for example see figures 2-4; col. 5, lines 2-13; where the talk group identifications, e.g. "*communication identification number*", are mapping to multicast addresses by the controller, e.g. "*means for mapping*"), *and wherein a packet communicated to the multicast address is*

distributed by the digital communication network and the plurality of routers to a subset of the plurality of communication devices using a virtual circuit fiber (for example see figure 2; col. 1, lines 25-28) *based on priority and wide area call inactivity* (where the IGMP is used for forwarding information such as report, update, reconfiguration with join message between routers across the network as disclosed in col. 3, lines 58-65; col. 6, lines 4-8; leave message or no longer affiliated with the site, e.g. "*distribution is based on the wide area call inactivity*", as disclosed in col. 8, lines 14-20; and wherein it is obvious that 'voice' has higher priority than data, e.g. "*distribution is based on priority*").

Shaughnessy does disclose the talk group, e.g. "*communication group identification number*" for communicating in different environment as dosclosed in col. 3, lines 26-29; but fails to explicitly disclose wherein *the communication group identification number including a network access code 'NAC'*. However, such implementation is known in the art.

For example, **Brennan** discloses the talk group and channel identification code, e.g. "*network access code NAC*", in the channel assignment message for indicating the assigned working channel to the subscriber unit with intended talk group (for example see col. 2, lines 54-60) in the multi channels, i.e. different frequencies. **Brennan** also discloses about the priority of the talk group and channel as disclosed in col. 15, line 63 through col. 16, line 2.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to provide the channel identification code as taught by **Brennan** with the talk group identification in the **Shaughnessy**'s reconfiguration message, with the motivation being to control the tuning frequency for providing a reliability during communications as disclosed in **Brennan**: col. 27, lines 25-31.

- Regarding claims 26 and 27, **Shaughnessy** further teaches, *wherein the transceiver includes a computer console* (for example see figure 4; col. 5, lines 2-8; where the controller manages the operation for the site); *a telephony gateway* (for example see col. 3, lines 13-15). **Brennan** also discloses about the control channel monitoring circuit and the voice channel monitoring circuit as disclosed in col. 15, lines 34-60.

- In regard to claims 28-30, **Shaughnessy** further teaches, *wherein the digital communication network includes an Ethernet network* (for example see col. 3, lines 45-48); *the Internet* (for example see col. 3, lines 45-48). **Shaughnessy** does disclose different types of network such as the local area and wide area network (for example see figure 2; col. 3, lines 34-36); but fails to specifically disclose the "*private network*". However, the private network is well known in the art for providing security.

Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to use the "*private network*" to provide security for their own network, as for the system engineering choices.

- Regarding claims 31 and 37-38, **Shaughnessy** further discloses, *wherein a router includes a look up table* (for example see col. 9, lines 54-56; where the information is maintained/stored at each sites as disclosed in col. 5, lines 2-13; col. 6, lines 51-54; col. 7, lines 40-44); *means for mapping includes a processor adapted for dynamic mapping* (for example see figures 2-3; col. 2, lines 53-58; where the sites are logically arranged into talk groups and where

the controller manages/maps the talk group to multicast address as disclosed in col. 4, lines 2-10).

- In regard to claim 32, Shaughnessy discloses, *a method comprising*

receiving a message from a caller on a network, the message including a group identification code (for example see col. 6, lines 38-42; where the site receives the affiliation message including the talk group identification, e.g. "*group identification code*", from the subscriber unit as illustrated in step 601 of figure 6);

receiving a registration request from one or more receivers on the network (for example see col. 6, lines 38-39; where the site receives an affiliation message, e.g. "*a registration request*", illustrated in Fig. 6, step 601);

mapping the group identification code to a multicast address (for example see step 603 in figure 6; col. 5, lines 9-10; col. 7, lines 5-9);

transmitting a signal to a plurality of stations on the network, the plurality of stations selected as a function of the multicast address, the signal adapted to configure the network to direct the message to the one or more receivers (for example see col. 7, lines 17-21, 26-31; once the proper multicast address has been identified, the site transmits a message (transmits a signal) as illustrated in Fig. 6 step 604).

Shaughnessy does disclose the talk group, e.g. "*communication group identification number*" for communicating in different environment as dosclosed in col. 3, lines 26-29; but fails to explicitly disclose wherein *the communication group identification number including a network access code 'NAC'*. However, such implementation is known in the art.

For example, **Brennan** discloses the talk group and channel identification code, e.g. "*network access code NAC*", in the channel assignment message for indicating the assigned working channel to the subscriber unit with intended talk group (for example see col. 2, lines 54-60) in the multi channels, i.e. different frequencies.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to provide the channel identification code as taught by **Brennan** with the talk group identification in the **Shaughnessy**'s reconfiguration message, with the motivation being to control the tuning frequency for providing a reliability during communications as disclosed in **Brennan**: col. 27, lines 25-31.

- Regarding claims 33-34, **Shaughnessy** further discloses, *wherein mapping includes accessing a table* (for example see figure 2; col. 9, lines 54-56; where the site controller accessing table 225 is maintained/stored at each sites as disclosed in col. 5, lines 2-13; col. 6, lines 51-54; col. 7, lines 40-44)*; dynamically establishing a virtual circuit* (where the sites are logically arranged into talk groups and mappings of talk group identifications to multicast address as disclosed in col. 2, lines 53-58; col. 3, lines 12-21; a virtual circuit between site 208 and subscriber 214 (a virtual circuit that appears to a subscriber as logical arrange point-to-point link, and disconnects when the call is over), e.g. "*virtual circuit*", as disclosed in figure 2).

- In regard to claim 35, **Shaughnessy** further teaches, *wherein receiving a message includes receiving a packet of digital data encoded in an Internet protocol 'IP'* (IP multicast packet is encoded in an Internet protocol as disclosed in col. 3, lines 56-58).

Response to Amendment/Arguments

5. Applicant's arguments filed on August 5th, 2005 with respect to amended claims 1, 22, 25, 32 and 36 have been considered but are moot in view of the new ground(s) of rejection.

Claims 2-6, 8-15, 17-21, 23-24, 26-31, 33-35, and 37-38 are rejected as in Part 4 above of this Office action and by virtue of their dependence from claims 1, 22, 25, 32 and 36.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wilson et al. (U.S.6,141,533), **Brennan et al.** (U.S.5,956,648) and **Wiatrowski et al.** (U.S.5,806,002) are all cited to show devices and methods for improving the communication in the wireless network architecture, which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on (571) 272-3179.

Any response to this action should be mailed to:

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Washington, D.C. 20231

or faxed to:

(571) 273-8300

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tri H. Phan
July 14, 2006

CHI PHAM
SUPERVISORY PATENT EXAMINER 7/17/06